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Needs Review by EFED

1-220, 105  
7/6/98  
MRID No. 444577-74

DATA EVALUATION RECORD  
SEEDLING EMERGENCE TIER I TEST  
§ 122-1

1. **CHEMICAL:** Prohexadione calcium PC Code No.: 112600

2. **TEST MATERIAL:** BAS 125 06 W Purity: 28.6%

3. **CITATION:**

Authors: R.S. Chetram

Title: Tier I - Seedling Emergence Nontarget  
Phytotoxicity Study Using BAS 125 06 W

Study Completion Date: July 9, 1997

Laboratory: ABC Laboratories California, Madera, CA

Sponsor: BASF Corporation, Research Triangle Park,  
NC

Laboratory Study ID: 96575

MRID No.: 444577-74

DP Barcode: D245631

4. **REVIEWED BY:** Mark Mossler, M.S., Toxicologist,  
Golder Associates Inc.

**Signature:** *Mark Mossler*

**Date:** 7/1/98

**APPROVED BY:** Pim Kosalwat, Ph.D., Senior Scientist,  
Golder Associates Inc.

**Signature:** *P. Kosalwat*

**Date:** 7/1/98

5. **APPROVED BY:**

**Signature:**

**Date:**

6. **STUDY PARAMETERS:**

**Definitive Study Duration:** 21 days

7. **CONCLUSIONS:** This study is scientifically sound but does not fulfill the guideline requirements for a seedling emergence study with terrestrial plants. BAS 125 06 W at the maximum application rate (1.7 lb ai/A) plus 5.9 lb/A of ammonium sulfate plus 2.5 mL/L of surfactant were applied to ten species of terrestrial plant. None of the species tested were affected by 25% when compared to the control for each measured parameter.

8. **ADEQUACY OF THE STUDY:**

A. **Classification:** Supplemental.



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(5)

- A. **Classification:** Supplemental.
- B. **Rationale:** The usage of the test material was not explained.
- C. **Repairability:** Yes, if the test material is always to be used with ammonium sulfate and a surfactant, then the results of the study may be upgraded to the "core" category. However, if the material can be used alone, it must be tested alone.
9. **GUIDELINE DEVIATIONS:** With the exception of lack of usage information, no deviations of consequence were noted.
10. **SUBMISSION PURPOSE:**
11. **MATERIALS AND METHODS:**

## A. Test Organisms

| Guideline Criteria  | Reported Information  |
|---|---|
| <b>Species</b><br>6 dicots in 4 families, including soybean and a rootcrop; 4 monocots in 2 families, including corn. | <u>Dicots</u> : cabbage, cucumber, lettuce, radish, soybean, tomato<br><u>Monocots</u> : corn, oat, onion, ryegrass |
| <b>Number of seeds per rep</b><br>10  | 10  |
| <b>Source of Seed</b>   | Commercial suppliers  |
| <b>Historical % Germination of Seed</b>   | ≥80%  |

## B. Test System

| Guideline Criteria                   | Reported Information                                 |
|--------------------------------------|--|
| <b>Solvent</b>                       | None   |
| <b>Site of test</b>                  | Greenhouse   |
| <b>Planting method / type of pot</b> | Planted on the day of application/7.5-cm square pots |
| <b>Method of application</b>         | Spray booth  |

| Guideline Criteria                            | Reported Information |
|---|----------------------|
| Method of watering                            | Overhead irrigation  |
| Growth stage at application<br>Seed or plant. | Seed                 |

## C. Test Design

| Guideline Criteria                         | Reported Information  |
|--|---|
| Dose range<br>2x or 3x                     | N/A   |
| Doses<br>At least 5                        | 1.7 lb active ingredient (ai)<br>plus 5.9 lb ammonium sulfate<br>applied per acre plus 2.5 mL<br>of Latron AG 98/L of spray<br>solution |
| Controls<br>Negative and solvent           | Negative (deionized water)<br>control   |
| Replicates per dose<br>At least 3          | 5 replicates  |
| Duration of test<br>14 days                | 3 weeks   |
| Were observations made at<br>least weekly? | Observations made on days 10,<br>14, and 21 after application   |
| Maximum labeled rate                       | 1.7 lb ai/A   |

12. REPORTED RESULTS:

| Guideline Criteria   | Reported Information |
|--|----------------------|
| Quality assurance and GLP<br>compliance statements were<br>included in the report? | Yes                  |
| Was an NOEL observed for each<br>species?  | N/A                  |
| Phytotoxic observations  | Yes                  |
| Were initial chemical<br>concentrations measured?<br>(Optional)                    | No                   |

| Guideline Criteria               | Reported Information |
|----------------------------------|----------------------|
| Were adequate raw data included? | Yes                  |

## Results for the most sensitive parameter of each species\*

| Species  | Parameter              | Inhibition (%) |
|----------|------------------------|----------------|
| Cabbage  | dry weight             | 11             |
| Cucumber | emergence              | 5              |
| Lettuce  | dry weight             | 24             |
| Radish   | height                 | 5              |
| Soybean  | no parameter inhibited | N/A            |
| Tomato   | "                      | N/A            |
| Corn     | dry weight             | 2              |
| Oat      | height                 | 16             |
| Onion    | "                      | 8              |
| Ryegrass | dry weight             | 17             |

\*The most sensitive parameter is based on percent inhibition.

Observations: No visual phytotoxicity signs (stunting, chlorosis, leaf desiccation, very poor vigor, or death) were observed on any of the ten test species during the test.

Statistical Method: Analysis of variance was conducted for each species parameter. It was stated that effects on measured parameters were less than 25%.

13. **VERIFICATION OF STATISTICAL RESULTS:** Tier 1 testing does not require statistical analyses. Upon review of the raw data, the values were verified and are correct. None of the measured parameters were affected by 25% or greater.

14. **REVIEWER'S COMMENTS:** The formulated material and ammonium sulfate were mixed in equal amounts (i.e., 5.9 pounds of each per acre). A surfactant (Latron AG 98) was also added to the spray mixture at a concentration of 2.5 mL/L. If the test material is only to be applied in this manner (with ammonium sulfate and surfactant), then this study is scientifically

sound, fulfills the guideline requirements, and can be classified as "core for a formulated product." However, since the usage was not explained by the author, the study is classified as **Supplemental**.